

Title (en)

Overcurrent protection device for semiconductor element

Title (de)

Überstromschutzvorrichtung für Halbleiterbauelemente

Title (fr)

Dispositif de protection contre les surintensités pour élément semi-conducteur

Publication

EP 1804383 A3 20080827 (EN)

Application

EP 06025052 A 20061204

Priority

JP 2005378733 A 20051228

Abstract (en)

[origin: EP1804383A2] An overcurrent protecting device for protecting a semiconductor element (1) from an overcurrent includes: the semiconductor element (1); a shunt resistor (9) for detecting the overcurrent when the electric current in the semiconductor element (1) exceeds a threshold value; a reference resistor (13) for setting the threshold value; a constant electric current circuit (12) for supplying a constant electric current to the reference resistor (13); and a comparator (10) for comparing a terminal voltage of the shunt resistor (9) and a terminal voltage of the reference resistor (13). The shunt resistor (9) is made of a same kind of resistor as the reference resistor (13).

IPC 8 full level

H03K 17/082 (2006.01); **H03K 5/08** (2006.01); **H03K 17/0812** (2006.01)

CPC (source: EP US)

H03K 5/08 (2013.01 - EP US); **H03K 17/08122** (2013.01 - EP US); **H03K 17/08126** (2013.01 - EP US); **H03K 17/0822** (2013.01 - EP US); **H03K 17/0826** (2013.01 - EP US); **H03K 17/14** (2013.01 - EP US); **H03K 17/145** (2013.01 - EP US)

Citation (search report)

- [XY] US 5825234 A 19981020 - SUNG HWAN-HO [KR], et al
- [Y] US 2003169072 A1 20030911 - KINUGAWA HIROKI [JP], et al
- [A] DE 4223338 A1 19940120 - ANT NACHRICHTENTECH [DE]
- [Y] DE 10035388 A1 20020207 - INFINEON TECHNOLOGIES AG [DE]
- [DA] US 4553084 A 19851112 - WRATHALL ROBERT S [US]

Cited by

CN102195624A; EP2367288A1; EP2372913A1; FR2958469A1; US8629710B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 1804383 A2 20070704; **EP 1804383 A3 20080827**; **EP 1804383 B1 20150211**; JP 2007181349 A 20070712; JP 4626513 B2 20110209; US 2007146952 A1 20070628; US 7505240 B2 20090317

DOCDB simple family (application)

EP 06025052 A 20061204; JP 2005378733 A 20051228; US 60225906 A 20061121